

VIRTUAL INTERNSHIPS PROVIDED IN COLLABORATION AMONG COMPANIES AND UNIVERSITIES - THE FUTURE OF PRACTICAL DEVELOPMENT OF STUDENTS

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Abstract

A successful transition from university to labor market is one of the biggest concerns of the students in Europe, as they face increasing difficulties in finding employment. Internships help young people to make first steps in their career in a challenging economic environment. According to the research of internships.com, 36% more companies offered internships in 2012 than in 2011 and 53% companies plan to have more interns in 2013 than in 2012.

Moreover, usage of e-technologies for work and number of jobs from distance are increasing every year mainly because of their flexibility and low costs. They lead to the expansion of the virtual internships (VIs). The aforementioned research shows that 33% of employers in the USA organise VIs and 71% of students would consider a VIs. Unfortunately, VIs are almost unknown in Europe and there are very few examples of using e-technologies to strengthen cooperation among universities, companies and students.

Board of European Students of Technology (BEST) is a constantly growing non-profit and non-political organisation that strives to develop students. It involves 96 technical universities reaching 1 300 000 students throughout its activities. One of the focus areas is Educational Involvement through which BEST strives to bring the development of European Engineering Education (EEE) closer to the students as well as to bring their opinion into the spotlight in order to meet theirs, academics' and industry's needs.

In order to provide student's input on the topic of VIs, BEST organised a student symposium in cooperation with PROVIP (Promoting Virtual mobility in Placements) and the local university. PROVIP is a thematic network which aim is to build and promote a platform for structural cooperation between universities and enterprises to organize VIs across Europe. During this symposium 16 European students discussed current internship system, advantages and disadvantages of VIs and idea of a perfect VIs' model and platform.

The research resulted in a set of recommendations and students' preferences towards the implementation of the VIs in Europe. Outcomes say that VIs should last from 6 to 12 months with workload and deadlines which will suit students' obligations. Interns should have an opportunity to choose a task which will preferably be part of bigger project, so that the intern gets a chance to contribute to the company's development. Additionally, structure of tasks description was defined.

Participants suggested regular reports for successful communication among the stakeholders and gave feedback to a VI platform's design and content. Moreover, they defined roles and requirements for each stakeholder.

University should be involved throughout the whole process of the internship with main tasks to promote VIs to students, follow-up on milestones and ensure success of the project. The promotion of the platform should be done by all stakeholders using modern and traditional media, but also by personal contacts.

In the time of globalisation and economic crisis companies are trying to establish an international environment and lower costs by using technological innovations. Students are looking for more internship opportunities in order to enrich their experience and CVs. Consequently, VI impose as the future of practical development of students. This research resulted with proposal for the "perfect" VI

model and platform for Europe considering all the differences in approaches in EEE.

Keywords: Virtual internship, platform, European, BEST, PROVIP, collaboration.

1 INTRODUCTION ON VIRTUAL INTERNSHIPS

There are several reasons and benefits for students to become international interns, nonetheless, sometimes students are not able to afford it due to financial or personal reasons, such as university obligations, transportation issues, distance of the internship, etc.

Virtual internships are possible due to the latest technological advancement. They offer a possibility to overcome some of the aforementioned issues. Furthermore, they provide an opportunity for many more students without worrying about the location of company or lecture schedules. VIs bring a lot of benefits to students and companies. Some advantages to consider them are the high flexibility in planning of time and tasks, lower costs for companies and interns (connected to amongst others equipment, space and transportation), larger applicant pool for companies, flexible working hours and a new experience itself^[1].

Unfortunately, these kind of internships are not applicable to all fields of studies and people. Students practicing it ought to be very independent workers, with good time management skills. On the other hand, employers should be very open to e-technologies and facilitate the virtual communication. Referring to one survey on VIs from internships.com^[2], the results suggest that the number of conducted internships is constantly growing in the USA. 33% of employers organise VI and 71% of students have considered becoming interns in a VI.

Even though VI have established a niche in the USA market, it wasn't before 2009 when a structured project, EU-VIP, was launched for the first time. Based on it's outcomes, PROVIP project was created. It is a follow-up project responsible of the development of a platform allowing those VIs in Europe, which is running from 2012 until 2014.

1.1 Current status of virtual internships

Despite the growing popularity of international internships, there is still a poor connection between universities and companies during the internship process. Usually the agreement is established between the student and the host company, leaving possible cooperation with university aside. Creating a stable communication and cooperation between the three stakeholders is one of the goal of PROVIP project and this is defined in section 3 in this paper.

By using online platforms for virtual internships the communication between students, universities and companies can be much easier.

Now days, PROVIP thematic network is coordinating a pilot platform connecting all three stakeholders. Development of the platform was based on input gathered via surveys from universities and companies and from students via BEST symposium. Methods and results from those symposia are commented in greater detail in section 2 and 3. Although the PROVIP project and their VIs platform are still in a development stage, therefore the final results will be release with the final project report on 2014.

1.2 International dimension

Virtual internships idea and platform was developed by PROVIP team which consists of 8 Universities and organisations related to students, universities and companies with idea to cover experiences from all stakeholders and make platform which can be implemented in any educational system or company in Europe. All partners are turned towards contributing to the internationalization either by accepting international students or by having member organisations from the whole world. That is why they respect the international dimension and bring added value to the outcomes of the project.

BEST, as partner in project and organiser of symposia is presented in 96 universities in 33 countries in Europe. Due to this fact, its role is to bring together students with different backgrounds and experiences and provide input on developed system and platform to make them more suitable for students from different parts of Europe^[3]. In order to enhance international dimension of event BEST

selected international team of facilitators who developed sessions and worked with participants.

2 METHODS

As a part of thematic networks (TNs), EU-VIP and PROVIP, BEST have done three symposia on education in the field of virtual internships. The goal was to collect students' input on different aspects of virtual internship. EU-VIP project had aim to investigate how virtual mobility can support and enhance international work placements. During two years 19 virtual internships were organised as pilot projects with scenario defined by the three stakeholders: students, universities and companies^[4]. First two symposia were related to this project with aim to assess students' expectations on VIs and evaluate implemented pilot projects.

Even though EU-VIP project brought insights into how virtual mobility can facilitate international work placements with benefits for each of the three stakeholders. In 2012 project PROVIP started with goal to disseminate information about VIs and build a structural cooperation between universities and enterprises to organize traineeships across Europe through the development of collaboration platform^[5].

2.1 Structure and aim of symposia

The most recent symposium "Bringing Education and Entrepreneurship under students' scope" was organised in Timisoara in July 2013 in order to gather input from students from the whole Europe on VIs^[6]. During this symposium 16 European students discussed current internship system, advantages and disadvantages of VIs and concept of a perfect VIs' model and platform. Participants were selected by means of applications and through a selection process which was based on criteria such as: quality of motivation, distribution of participants across the Europe and their knowledge and experience with internships or VIs.

The role of BEST during the event was to inform the students about VIs and PROVIP project, to encourage the sharing between students and gather their opinions on the platform and virtual internship system.^[6]

In order to reach the abovementioned goal and stimulate discussion and involvement in the symposium various facilitation techniques were used. Those methods were adapted to the type of topic and expected outcomes. The structure of event was developed with an idea of having a smooth transition between sessions and information, so the first sessions focused on expectations and experiences and served as an introduction to the last topic. Second block was intended to familiarize students with virtual internships, while last part focused on gathering input and feedback from participants respecting personal background and experience they had.

2.2 Presentation form

In order to simulate three stakeholders of the project, participants were divided in 3 groups with a task to put themselves in a position of one of the stakeholders and evaluate proposed structure or write expectations from other two stakeholders. After the internal discussion each group had, they presented their results to everyone and feedbacked each others work and conclusions.

This format was also used for groups of 2, while gathering input on advantages and drawbacks of VIs system. This session form was used as well for comparing internships provided by the universities or directly in communication between a student and a company. Participants were divided in 4 groups to discuss different special situations and problems in VIs system such as:

- duration and workload
- involvement of university in communication between company and student during the internship
- delivering responsibilities to student
- promotion and information

2.3 Learning cafe

In order to reach extensive input from all participants and to put each of them in a position of each

stakeholder, few sessions were conducted using learning cafe facilitation technique (Fig.1).

Each stakeholder was presented by one table where one facilitator was explaining the situation and maintaining the discussion from stakeholders' point of view. After certain amount of time students changed tables and new group had to feedback, develop further ideas of previous team, but also derive new ideas based on work of previous team.

This method was used to gather input on desired behaviors of each stakeholder and interaction between stakeholders.

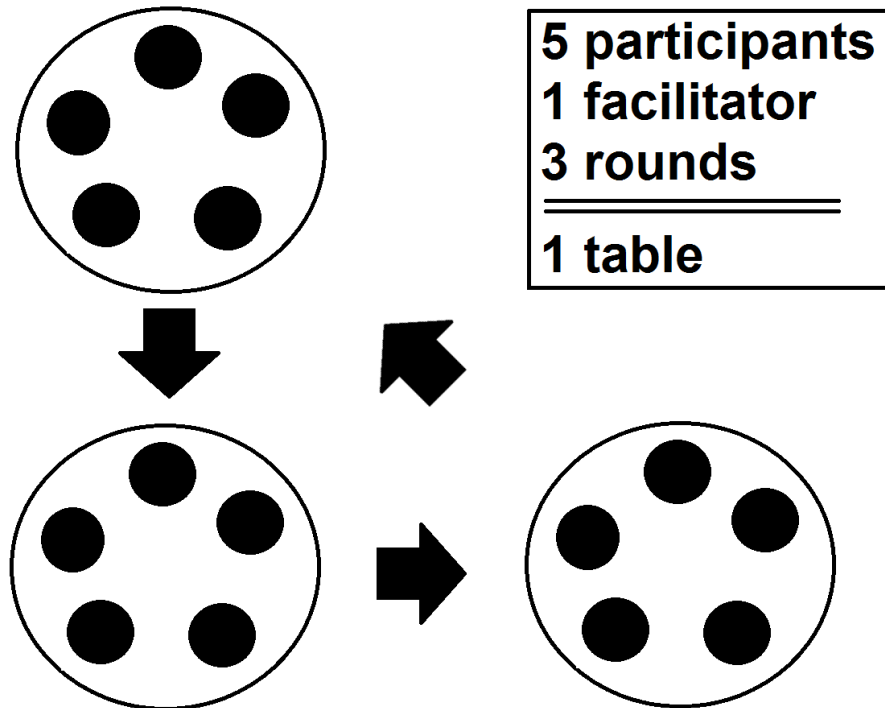


Fig. 1: Visualisation of the Learning cafe concept

3 RESULTS

During the symposium several aspects of VIs were tackled. Everything from comparison to classic internships, ways of finding them and their setup to preferred interaction with other involved parties. In following sections focus will be on VIs and the optimal interaction between involved stakeholders in students' opinion.

3.1 Virtual Internships according to students

What has drawn students towards the concept of VIs is the mobility and flexibility they offer. By this they feel more autonomous and it also enhances their creativity by allowing them to work in environment and time that is most suitable for them. At the same time the diversity in the company is enhanced and costs taken by both parts are much lower in comparison to classic internships. Nevertheless there are downsides to VIs. Resources and subjects for whom these kinds of internships are applicable are limited. It's much easier for information breach to occur and all sorts of communication and knowledge transfer are more difficult. All advantages and disadvantages pointed out by students are listed in "Table 1".

Table 1: Advantages and disadvantages of virtual internships.^[6]

Advantages	Disadvantages
<ul style="list-style-type: none"> • Mobility • Flexibility (special conditions) • Different countries, different economies • Access to university resources • No extra costs for the intern • Autonomy • Avoidance of possible conflicts • Enhanced creativity • Empowered diversity for the company • More places available for more students 	<ul style="list-style-type: none"> • Self organization • Lack of physical access to the equipment • Lack of social interaction • Different time zones • Communication problems and misunderstandings • Limited resources and subjects • Slow process • Information breach • Low attachment • Difficult knowledge transfer

To avoid those potential problems students suggested several criteria and guidelines by which VIs should be organized.

Firstly, duration and workload should be adjusted towards both student and company needs. As those internships can be easily combined with studies or another job weekly working hours shouldn't come in discordance. During summer holidays, internships can be shorter but more intensive as students have a lot of free time, while during academic year, internship could be longer and the workload spread out over several months so that students can still fulfill their obligations at the university^[6].

Secondly, a clear set of deadlines and milestones is needed. This is necessary to be able to monitor project progress as well as be able to spread out the workload. In case of virtual internship, over viewing intern's work as well as asking for additional information is more difficult than when the intern is working in the company's office due to the physical barrier in form of long distance. To prevent any miscommunication, regular meetings and reporting has to be scheduled to ensure continuous work flow. Also, this will give student greater feeling of security and belonging to the company^[6].

Thirdly, tasks given to the intern should not be only applicable to their interest and field of studies but also give interns possibility to contribute to a bigger project. VIs seem quite isolating to many, therefore feeling of belonging to a group has to be provided via different channels. By taking internship, students don't want to only fulfill university's requirements regarding job experience, but more importantly try out their newly gained skills and practice and get the feeling of working life that's waiting for them after they finish their engineering education^[6].

3.2 Interaction among stakeholders

To ensure that all involved parties reach their goal, good communication and active interaction have to be ensured. Basing the communication model on the one presented by PROVIP, "(Fig.2)", students discussed various aspects of the interaction. Although PROVIP's model shows blended internship where both virtual and physical communication occurs, we asked students to focus on purely virtual internship.

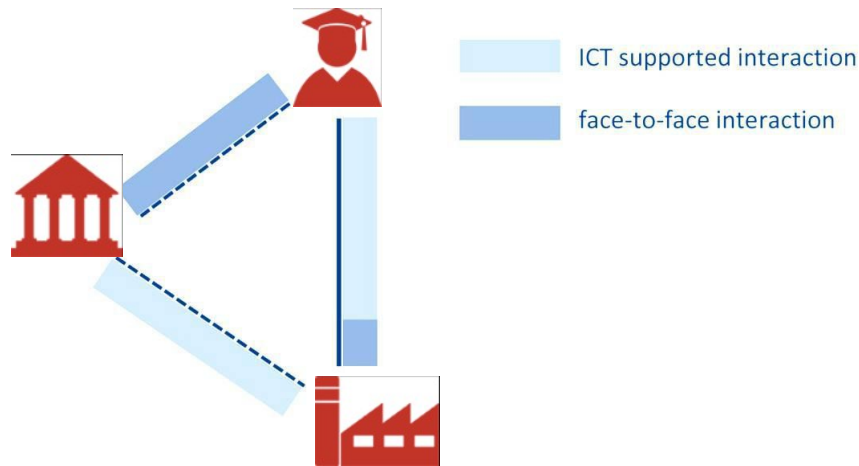


Fig. 2: PROVIP model of stakeholder interaction.^[5]

Ideally students should be active, creative, professional and not afraid of new things, as in any other kind of internship. In some cases VIs might be more demanding than the classic ones, as they require additional skills that involve greater self-discipline and time management. They put to the test other abilities than the one that are tested in classic internships and develop more interdependent students.

As for company, they should be able to provide all necessary support and knowledge. Each intern should have a mentor and potentially be a part of a group of interns to guide and support each other. Mentors job wouldn't be only to overview intern's work and answer on questions but also to adjust task and workload according to performance and interest. He would be the main contact person for intern in the company, making it crucial that this person can provide enough of guidance and time to the intern.

Lastly, university's role isn't as great as of student and company. As higher engineering institution, they should be able to provide student with knowledge that company don't have as well as intervene when a conflict between intern and his employer occur. One of the main task for the university would be to promote VIs amongst its students and guide them in choosing the right one for them. Also constant over viewing of the progress of the project is important but in smaller detail than the company.

Preferably, university and industry should be in contact exchanging offers about job openings and potential interns. This interaction is the starting point for the actual projects, since students quite often seek advice at the university. During the internship their communication isn't as vital as before. At that time it's all up to the intern and his company mentor to keep the project running. Various ITC tools should be available and actively used to facilitate the communication. After the internship is finalized it should be evaluated by all parties. This information is crucial for the future internships. As this is a brand new concept in Europe we are still in the learning phase. Abovementioned points are just suggestions based on students' personal experience and preferences.

4 CONCLUSION

New technology, internationalization and globalization of educational and professional world offers new possibilities for lowering the costs and increasing opportunities for students to work and gain experience and knowledge by participating in real projects. Traditional physical work placements abroad are not feasible for all students due to financial, geographical or social reasons. In order to provide opportunity for VIs in Europe PROVIP made proposal virtual internship system and platform. As a part of the project BEST organised an event to provide students' input and research about possible improvements from students' side. Final conclusions of the research were presented in this paper to demonstrate the newest findings in field of VIs as part of education of students and better relations among three stakeholders: universities, students and companies.

VIs program has many advantages, such as higher mobility, autonomy and flexibility, easier access to university resources, opportunities to take part in international projects and companies without extra costs. It brings empowered diversity for company and higher creativity to the intern.

One of the most important challenges of virtual internship system is designing an intuitive platform with useful tools for communication and assessment of quality of placement, good database with high number of internship offers and instruction kit on how to organise VIs.

Other notable points are related to profiles of stakeholders and their roles in the process. According to the research, VIs request many different characteristics of all parts comparing to standard internships. Even though they are more flexible and with lower costs, they requires high involvement of all sides and much tighter cooperation.

The outcomes of the research will be implemented in PROVIP project and platform with idea to be used as first system of this kind in Europe. In parallel with this, some platforms in USA for searching jobs and internships started to offer VIs as new service suitable for companies and students of certain profile.

Still, there is a space for further research on how to make all partners more involved and willing to implement this system and how to match current profiles of stakeholders with ideal profiles. Also, final implementation of platform and system by PROVIP thematic network should provide more insights in further steps and possible questions in field of VIs.

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